The Federal Perspective: EPA CHP Partnership

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Overview

- CHPP Basics
- CHPP Tools and Resources
- CHPP Priorities
Objective
• Seeks to reduce the environmental impact of power generation by promoting the use of CHP

Strategies and Actions
• Targets key regulatory, utility and information barriers
• Supports development of new CHP projects with credible and objective technical expertise
• Offers trusted tools, guidance, and technical assistance
• Recognizes superior systems through ENERGY STAR CHP Awards
• Provides expertise to support EPA Clean Air Act implementation

Results
• Through 2013, assisted in the deployment of 917 projects by CHPP partners totaling over 6,199 MW of capacity and avoiding over 129 MMTCO₂

Website: http://www.epa.gov/chp/
Almost 500 Partners...
CHP Partnership Resources for Project Developers

• Catalog of Technologies (updated)
• Project Development Handbook
• CHP Emissions Calculator
• Spark Spread Estimator
• CHP and Clean Water State Revolving Funds Fact Sheet (new)
CHP Catalog of Technologies

• Covers five commercially available CHP prime movers (Recip. Engine, Gas Turbine, B/S Turbine, Microturbine, Fuel Cell)
  – Description of common applications
  – Basic technology description
  – Cost and performance characteristics, incl. water use
  – Emissions and emissions control options
  – Future developments

http://www.epa.gov/chp/technologies.html
Spark Spread Estimator

- Enables user to conduct a very preliminary initial screening of potential CHP cost savings at a facility based on basic site data

- Estimator can generate spark spread estimate with as few as three inputs (location, business type and electricity use) using default figures

- Working on an update to enable application to smaller systems
CHP Partnership Resources for State Officials and Policy Advocates

- dCHPP (CHP Policies and Incentives database)
- State Permit-By-Rule Programs Fact Sheet
- Output-Based Regulations Handbook
dCHPP Database

- Allows users to search for CHP-favorable policies and incentives by state or at the federal level.
Permit-by-Rule (PBR) Factsheet

• Provides background on PBRs/general permits for CT, NJ and TX
• Overall observations, e.g.:
  – Challenge is to ensure that requirements are adequate but not so stringent that facility with typical CHP configuration goes with conventional permit
  – Include sufficient reporting and recordkeeping requirements to ensure compliance with permit requirements (stack test reports, notification when there is non-compliance, etc.)

Approaches to Streamline Air Permitting for Combined Heat and Power: Permits by Rule and General Permits

Introduction
Combined heat and power (CHP) is an efficient and clean approach to generating electric power and useful thermal energy from a single fuel source. CHP is used either to replace or supplement conventional separate heat and power. Instead of purchasing electricity from the local utility and burning fuel in an on-site facility or boiler to produce thermal energy as an industrial or commercial facility uses CHP to meet both energy sources in one energy-efficient step.

In installing a CHP system, a facility is required to obtain permits from local authorities to set up the system, connect it to the local grid, and operate it in compliance with local and state regulations. To ensure compliance with air quality standards, a facility, in consultation with the state or local permitting agency, reviews air permitting requirements and then obtains a permit before the system is installed and operated.

CHP stakeholders have identified the process for obtaining air permits to be time and resource-intensive, and a potential impediment to CHP projects. In the past decade, and particularly in the past two years, several states— including Connecticut, New Jersey, and Texas— have introduced streamlined permitting procedures for certain types of CHP units in order to simplify and speed up the permitting process.

The U.S. EPA CHP Partnership developed this factsheet to help policymakers and CHP advocates achieve a better understanding of streamlined permitting procedures.
Current CHPP Priorities

• Support for CHP in Clean Power Plan rules
• ENERGY STAR CHP Awards
  – Will present 2015 Awards at International District Energy Association (IDEA) Annual Conference in Boston on June 29
• CHP and LEED
  – Developing education/outreach products targeted at architects, engineers, and LEED consultants
  – Address CHP industry information gaps about LEED scoring of CHP systems
• Promoting CHPP tools and resources
• Engaging with clean energy stakeholders
  – Receiving wide range input through public comments on the proposed Clean Power Plan rule
  – Participation in conferences – e.g., DistribuGen, Electric Power, NFMT High Performance Buildings Conference, IDEA
  – Upcoming webinars with the Business Council for Sustainable Energy and the CHP Association
Support for Draft Clean Power Plan (CPP) Rule

- Received comments on CHP and WHP from @ 100 organizations on draft CPP rule
- Nature of comments
  - CHP should be/not be factored into state goals
  - CHP should be available to states as a compliance option in their plans
  - Industrial CHP should be/not be exempted
  - CHP systems should have 100% of the thermal output credited
- Final rule to be released this summer
CHP and LEED Project - Example

Macedonia Apartments in Flushing, NY

- Project completion estimated 2015
- 147,950 square feet; 14 stories
- 200 kW CHP plant consisting of two Tecogen InVerde 100 kW modules
- On track for LEED Gold (75 points)-v2009
- CHP contributed to 16 points awarded for the “Energy and Atmosphere, Optimize Energy Performance” credit
# CHP’s Demonstrated LEED Point Impact – Other Examples

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* Would not meet Prerequisite w/out CHP
Questions?

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